

## SEQUENCE LISTING

<110> NOEL, JOSEPH  
 FERRER, JEAN-LUC  
 JEZ, JOSEPH  
 AUSTIN, MIKE  
 BOWMAN, MARIANNE

<120> METHODS AND COMPOSITIONS FOR DETERMINING ENZYMATIC ACTIVITY

<130> SALK2370-2

<140> 10/031,918

<141> 2001-07-27

<150> 60/145,898

<151> 1999-07-27

<160> 7

<170> PatentIn version 2.1

<210> 1

<211> 389

<212> PRT

<213> Medicago sativa

<220>

<221> VARIANT

<222> (164)

<223> Cys or Ala

<220>

<221> VARIANT

<222> (303)

<223> His or Gln

<220>

<221> VARIANT

<222> (336)

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Ala Thr Ile Leu Ala Ile Gly Thr Ala Asn Pro Ala Asn Cys Val Glu  
 20 25 30

Gln Ser Thr Tyr Pro Asp Phe Tyr Phe Lys Ile Thr Asn Ser Glu His  
 35 40 45

Lys Thr Glu Leu Lys Glu Lys Phe Gln Arg Met Cys Asp Lys Ser Met  
 50 55 60

Ile Lys Arg Arg Tyr Met Tyr Leu Thr Glu Glu Ile Leu Lys Glu Asn  
 65 70 75 80

Pro	Asn	Val	Cys	Glu	Tyr	Met	Ala	Pro	Ser	Leu	Asp	Ala	Arg	Gln	Asp		
				85					90					95			
Met	Val	Val	Val	Glu	Val	Pro	Arg	Leu	Gly	Lys	Glu	Ala	Ala	Val	Lys		
			100					105						110			
Ala	Ile	Lys	Glu	Trp	Gly	Gln	Pro	Lys	Ser	Lys	Ile	Thr	His	Leu	Ile		
		115					120					125					
Val	Cys	Thr	Thr	Ser	Gly	Val	Asp	Met	Pro	Gly	Ala	Asp	Tyr	Gln	Leu		
	130					135					140						
Thr	Lys	Leu	Leu	Gly	Leu	Arg	Pro	Tyr	Val	Lys	Arg	Tyr	Met	Met	Tyr		
145					150					155					160		
Gln	Gln	Gly	Xaa	Phe	Ala	Gly	Gly	Thr	Val	Leu	Arg	Leu	Ala	Lys	Asp		
				165					170					175			
Leu	Ala	Glu	Asn	Asn	Lys	Gly	Ala	Arg	Val	Leu	Val	Val	Cys	Ser	Glu		
			180					185					190				
Val	Thr	Ala	Val	Thr	Phe	Arg	Gly	Pro	Ser	Asp	Thr	His	Leu	Asp	Ser		
	195						200					205					
Leu	Val	Gly	Gln	Ala	Leu	Phe	Gly	Asp	Gly	Ala	Ala	Ala	Leu	Ile	Val		
210						215				220							
Gly	Ser	Asp	Pro	Val	Pro	Glu	Ile	Glu	Lys	Pro	Ile	Phe	Glu	Met	Val		
225					230					235					240		
Trp	Thr	Ala	Gln	Thr	Ile	Ala	Pro	Asp	Ser	Glu	Gly	Ala	Ile	Asp	Gly		
				245					250					255			
His	Leu	Arg	Glu	Ala	Gly	Leu	Thr	Phe	His	Leu	Leu	Lys	Asp	Val	Pro		
			260					265						270			
Gly	Ile	Val	Ser	Lys	Asn	Ile	Thr	Lys	Ala	Leu	Val	Glu	Ala	Phe	Glu		
	275						280					285					
Pro	Leu	Gly	Ile	Ser	Asp	Tyr	Asn	Ser	Ile	Phe	Trp	Ile	Ala	His	Pro		
	290					295					300						
Gly	Gly	Pro	Ala	Ile	Leu	Asp	Gln	Val	Glu	Gln	Lys	Leu	Ala	Leu	Lys		
305					310					315					320		
Pro	Glu	Lys	Met	Asn	Ala	Thr	Arg	Glu	Val	Leu	Ser	Glu	Tyr	Gly	Asn		
				325					330					335			
Met	Ser	Ser	Ala	Cys	Val	Leu	Phe	Ile	Leu	Asp	Glu	Met	Arg	Lys	Lys		
			340					345					350				
Ser	Thr	Gln	Asn	Gly	Leu	Lys	Thr	Thr	Gly	Glu	Gly	Leu	Glu	Trp	Gly		
	355						360					365					
Val	Leu	Phe	Gly	Phe	Gly	Pro	Gly	Leu	Thr	Ile	Glu	Thr	Val	Val	Leu		
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Arg Ser Val Ala Ile  
385

<210> 2  
<211> 24  
<212> PRT  
<213> Medicago sativa

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Ser Glu Gly Ala Ile Asp Gly His Leu Arg Glu Ala Gly Leu Thr Phe  
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His Leu Leu Lys Asp Val Pro Gly  
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<210> 3  
<211> 24  
<212> PRT  
<213> Hordeum vulgare

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Ser Glu Gly Ala Ile Asp Gly His Leu Thr Glu Ala Gly Leu Thr Ile  
1 5 10 15

His Leu Leu Lys Asp Val Pro Gly  
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<210> 4  
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<212> PRT  
<213> Ruta graveolens

<400> 4  
Ser Asp Gly Ala Ile Glu Gly His Ile Arg Glu Glu Gly Leu Thr Val  
1 5 10 15

His Leu Lys Lys Asp Val Pro Ala  
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<210> 5  
<211> 24  
<212> PRT  
<213> Arachis hypogaea

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Ser His Gly Ala Ile Gly Gly Leu Leu Arg Glu Val Gly Leu Thr Phe  
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Tyr Leu Asn Lys Ser Val Pro Asp  
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<212> PRT

<213> Pinus strobus

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Ser Asp Gly Ala Ile Ser Gly Lys Leu Arg Glu Val Gly Leu Thr Phe  
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Gln Leu Lys Gly Ala Val Pro Asp  
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<211> 24

<212> PRT

<213> Phalaenopsis sp.

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Ser Ala Gly Ala Ile Gly Gly His Val Ser Glu Gly Gly Leu Leu Ala  
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Thr Leu His Arg Asp Val Pro Gln  
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